

REMARKS

By this amendment, Applicant has amended claims 9 and 24. No new matter has been added. The claims were amended per the suggestion of the Examiner. Claims 9-14 and 24-26 remain for consideration in the application.

Claim Rejections Under 35 U.S.C. § 112

Claims 9-14 and 24-26 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 9 and 24 have been amended to overcome the rejection under 35 U.S.C. § 112, first paragraph.

Claim Rejections Under 35 U.S.C. § 101

Claims 9-14 and 24-26 were rejected under 35 U.S.C. § 101 because the claimed invention lacks patentable utility. Applicant respectfully submits that the amendments to claims 9 and 24 overcome this rejection.

Claim Rejections Under 35 U.S.C. § 103

Claims 9-14 and 24-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McConnell et al. (U.S. Patent No. 5,986,952) in view of Raynham (U.S. Patent No. 5,127,014). Applicant traverses. The Office Action is at this point contradicting arguments made in previous Office Actions. These contradictions clearly indicate that the present Office Action is attempting to modify McConnell et al. in such a way that will directly conflict with not only the actual text of McConnell et al., but also with interpretations set forth in previous Office Actions.

Specifically, the fact is that McConnell uses and requires an external processor, and Raynham does not, so substituting Raynham for McConnell et al.'s working structure would substantially change the principle of operation of McConnell et al., which is not allowed under MPEP 2143.01.

Still further, as Applicant has already shown in its previous responses, McConnell et al. is explicit in its reliance on a redundancy detection device 4 and a repair device 5, and always uses redundancy in its structure. On the other hand, the specification of the present invention, which must be consulted to determine the scope of the claims in the application, explicitly discusses

operation without the need for a repair device. The error correction circuitry is built right into the memory device, in an on-chip fashion, therefore eliminating the need for a microprocessor or external hardware to perform detection and correction. No embodiment of McConnell is without the redundancy and external hardware/processor for doing the actual work that is performed on-chip in the present claims. Despite the Office Action's insistence that McConnell et al. reads on the claim, there is no evidence to support McConnell ever operating without a repair device. In fact, if there were no repair device such as device 5 in McConnell et al., McConnell et al. would provide a non-functional unit.

Combination of two references is only available if there is a suggestion or motivation to combine the references. That is clearly lacking in any combination of McConnell et al. and Raynham. No use of any on-chip ECC is amenable to combination with McConnell et al., because McConnell et al. is a fully functional unit with off-chip ECC specifically designed for redundancy. Any on-chip ECC, including that of Raynham, eliminates the need for the redundancy devices of McConnell et al., and renders them useless. This substantially alters the principle of operation of McConnell et al., and explicitly teaches away from the stated objects of McConnell et al., as stated in its summary: "It is accordingly an object of the invention to provide a redundancy concept for memory circuits ..." See McConnell et al., col. 1, ll. 54-55.

Raynham, like Barth, Jr., et al. before it, is cited for adding on-chip ECC. However, as has been clearly shown above, the addition of on-chip ECC would substantially alter the principle of operation of McConnell et al. by removing its redundancy scheme, a scheme that is required in each and every embodiment of McConnell et al. It is not sufficient to find the elements of a claim in multiple references. There must be a motivation or suggestion to combine those references. When a secondary reference (in this case Raynham.) would render the prior art unsatisfactory for its intended purpose (as here, the provision of a redundancy scheme), or would change the principle of operation of the main reference, a rejection for obviousness is not proper (see MPEP 2143.01). As such, there is no motivation or suggestion to combine the references, and even if such a combination were allowable, it would not result in the present claimed subject matter. Neither McConnell et al., nor Raynham, nor any combination thereof, renders the present claims obvious.

Applicant respectfully submits that since McConnell et al. makes it clear that error correction is performed with a processor, that McConnell et al. does not teach each and every

element of the claims. Raynham is cited for adding on-chip ECC. Using Raynham for on-chip ECC, despite the fact that the Office Action already argues that McConnell et al. provides on-chip ECC (an assertion Applicant disputes), still does not teach or suggest, or offer a motivation to combine, the two references. The Office Action admits that a processor is used to carry out the functions of error correction in McConnell et al. This is not done in the claims as amended.

Applicant respectfully submits that claims 9 and 24 as amended recite limitations not found in any combination of McConnell et al. and Raynham. Applicant further submits that it is improper to combine McConnell et al. and Raynham at all, since substituting Raynham's ECC solution would significantly alter the principle of operation of McConnell et al.

Claims 10-14 and 25-26 depend from and further define one of patentably distinct claims 9 and 24, and are also believed allowable.


CONCLUSION

In view of the above remarks, Applicant believes that all pending claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. Please charge any further fees deemed necessary or credit any overpayment to Deposit Account No. 501373.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2203.

Respectfully submitted,

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